

## Claims:

1. A reaction product of specific mixtures of long-chain fatty acids and aliphatic diamines having an alkali number of  $< 10$  and an acid number of  
5  $< 15$ .
2. The reaction product as claimed in claim 1, wherein the ratio of mixtures of long-chain fatty acids to aliphatic diamines is 2 to 1.
- 10 3. The reaction product as claimed in claim 1 or 2, wherein the specific mixture of long-chain fatty acids comprises
  - 0-7% by weight of myristic acid
  - 0-85% by weight of palmitic acid
  - 0-85% by weight of stearic acid
  - 15 0-10% by weight of oleic acid
  - 0-90% by weight of 12-hydroxystearic acid,where the sum is always 100% by weight.
- 20 4. The reaction product as claimed in one or more of claims 1 to 3, wherein the mixture of long-chain fatty acids comprises
  - 0-7% by weight of myristic acid
  - 34-64% by weight of palmitic acid
  - 64-45% by weight of stearic acid
  - 0-10% by weight of oleic acid,
  - 25 where the sum is always 100% by weight.
- 30 5. The reaction product as claimed in one or more of claims 1 to 4, wherein the mixture of long-chain fatty acids comprises
  - 0-5% by weight of myristic acid
  - 40-60% by weight of palmitic acid
  - 60-40% by weight of stearic acid
  - 0-5% by weight of oleic acid,
  - where the sum is always 100% by weight.
- 35 6. The reaction product as claimed in one or more of claims 1 to 5, wherein natural or synthetic fatty acids are present as constituents.
7. The reaction product as claimed in one or more of claims 1 to 6,

wherein ethylenediamine is used as aliphatic diamine.

8. The reaction product as claimed in one or more of claims 1 to 7 in which saturated and/or unsaturated dicarboxylic acids are present.

5

9. The reaction product as claimed in one or more of claims 1 to 8, wherein the ratio of mixtures of long-chain carboxylic acids to aliphatic diamines to dicarboxylic acids is (1.8-1.98):1.0:(0.1-0.01).

10. The reaction product as claimed in one of more of claims 8 to 9, wherein the sum of the carboxyl functionality is always 2.

11. The reaction product as claimed in one or more of claims 8 to 10, wherein an alkali number of < 10 and an acid number of < 15 are set.

15

12. The reaction product as claimed in one or more of claims 8 to 11, wherein the mixture of long-chain fatty acids comprises

0-7% by weight of myristic acid

20-85% by weight of palmitic acid

20 85-45% by weight of stearic acid

0-10% by weight of oleic acid,

where the sum is always 100% by weight.

13. The reaction product as claimed in one or more of claims 8 to 12, wherein the mixture of long-chain fatty acids comprises

0-5% by weight of myristic acid

20-80% by weight of palmitic acid

80-20% by weight of stearic acid

0-10% by weight of oleic acid,

30 where the sum is always 100% by weight.

14. The reaction product as claimed in one or more of claims 8 to 13, wherein the diamine component used is ethylenediamine in combination with linear and/or cycloaliphatic diamines.

35

15. The reaction product as claimed in one or more of claims 8 to 14, wherein the combination comprises from 50 to 100% by weight of ethylenediamine and

from 0 to 50% by weight of linear and/or cycloaliphatic diamines.

16. The reaction product as claimed in one or more of claims 8 to 15, wherein the combination comprises

- 5 from 95 to 99.99% by weight of ethylenediamine and  
from 0.01 to 5% by weight of linear and/or cycloaliphatic diamines.

17. The reaction product as claimed in one or more of claims 8 to 16, wherein the diamine component used is ethylenediamine in combination  
10 with linear or cycloaliphatic diamines such as hexamethylenediamine or tricyclodecanediamine.

18. The reaction product as claimed in one or more of claims 8 to 17, wherein the mixture of long-chain fatty acids comprises

- 15 0-7% by weight of myristic acid  
0-85% by weight of palmitic acid  
0-85% by weight of stearic acid  
0-10% by weight of oleic acid,  
0-90% by weight of 12-hydroxystearic acid,  
20 where the sum is always 100% by weight.

19. A process for preparing reaction products as claimed in one or more of claims 1 to 18, wherein an alkali number of  $< 10$  and an acid number of  $< 15$  are set for the reaction products.

25

20. The use of reaction products as claimed in one or more of claims 1 to 18 as modifiers for bitumen.